

Year	Species	Country	StateName
2008	Amaranthus palmeri	United States	Alabama
2012	Amaranthus palmeri	United States	Arizona
1994	Amaranthus palmeri	United States	Arkansas
2006	Amaranthus palmeri	United States	Arkansas
2011	Amaranthus palmeri	United States	Arkansas
2016	Amaranthus palmeri	United States	Arkansas
2017	Amaranthus palmeri	United States	Arkansas
2015	Amaranthus palmeri	United States	California
2019	Amaranthus palmeri	United States	Connecticut
2012	Amaranthus palmeri	United States	Delaware
2014	Amaranthus palmeri	United States	Delaware
2008	Amaranthus palmeri	United States	Florida
2013	Amaranthus palmeri	United States	Florida
2013	Amaranthus palmeri	United States	Florida
2000	Amaranthus palmeri	United States	Georgia
2005	Amaranthus palmeri	United States	Georgia
2008	Amaranthus palmeri	United States	Georgia
2008	Amaranthus palmeri	United States	Georgia
2010	Amaranthus palmeri	United States	Georgia
2010	Amaranthus palmeri	United States	Illinois
2013	Amaranthus palmeri	United States	Illinois
2013	Amaranthus palmeri	United States	Illinois
2016	Amaranthus palmeri	United States	Illinois
2012	Amaranthus palmeri	United States	Indiana
1997	Helianthus annuus	United States	Iowa
1993	Amaranthus palmeri	United States	Kansas
1995	Amaranthus palmeri	United States	Kansas
1996	Helianthus annuus	United States	Kansas
2009	Amaranthus palmeri	United States	Kansas
2011	Amaranthus palmeri	United States	Kansas
2015	Amaranthus palmeri	United States	Kansas
2018	Amaranthus palmeri	United States	Kansas
2010	Amaranthus palmeri	United States	Kentucky
2010	Amaranthus palmeri	United States	Louisiana
2014	Amaranthus palmeri	United States	Maryland
2011	Amaranthus palmeri	United States	Michigan
2008	Amaranthus palmeri	United States	Mississippi
1996	Helianthus annuus	United States	Missouri
2008	Amaranthus palmeri	United States	Missouri
2011	Amaranthus palmeri	United States	Nebraska
2011	Amaranthus palmeri	United States	Nebraska
2014	Amaranthus palmeri	United States	Nebraska
2016	Amaranthus palmeri	United States	Nebraska
2014	Amaranthus palmeri	United States	New Jersey
2007	Amaranthus palmeri	United States	New Mexico
1995	Amaranthus palmeri	United States	North Carolina

MOAs

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2), PPO inhibitors (E/14)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9), Long chain fatty acid inhibitors (K3/15), Microtubule inhibitors (K1/3)

Long chain fatty acid inhibitors (K3/15)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)

Photosystem II inhibitors (C1/5)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9), Photosystem II inhibitors (C1/5)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)

EPSP synthase inhibitors (G/9), PPO inhibitors (E/14)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2)

ALS inhibitors (B/2)

Photosystem II inhibitors (C1/5)

ALS inhibitors (B/2)

ALS inhibitors (B/2), HPPD inhibitors (F2/27), Photosystem II inhibitors (C1/5)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9), HPPD inhibitors (F2/27), Photosystem II inhibitors (C1/5), Synthetic A
Synthetic Auxins (O/4)

EPSP synthase inhibitors (G/9)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2)

EPSP synthase inhibitors (G/9)

HPPD inhibitors (F2/27)

Photosystem II inhibitors (C1/5)

HPPD inhibitors (F2/27), Photosystem II inhibitors (C1/5)

EPSP synthase inhibitors (G/9), Photosystem II inhibitors (C1/5)

EPSP synthase inhibitors (G/9)

EPSP synthase inhibitors (G/9)

ALS inhibitors (B/2)

Actives

glyphosate

pyrithiobac-sodium, glyphosate

imazethapyr, imazaquin, pyrithiobac-sodium, chlorimuron-ethyl, diclosulam

glyphosate

pyrithiobac-sodium, fomesafen, trifloxysulfuron-sodium

imazethapyr, pyrithiobac-sodium, flumetsulam, fomesafen, lactofen, acifluorfen-sodium, fluthiacet-methyl, carfentrazon

S-metolachlor

glyphosate

imazaquin, chlorimuron-ethyl, halosulfuron-methyl, sulfometuron-methyl, glyphosate

glyphosate

chlorimuron-ethyl, glyphosate

pyrithiobac-sodium, imazapic

glyphosate

glyphosate, imazapic

imazethapyr, imazapic

glyphosate

pyrithiobac-sodium, glyphosate

atrazine

pyrithiobac-sodium, atrazine, glyphosate, imazapic

glyphosate

imazethapyr, primisulfuron-methyl

imazethapyr, primisulfuron-methyl, glyphosate

fomesafen, lactofen, glyphosate

glyphosate

imazethapyr, chlorimuron-ethyl

imazethapyr

atrazine

imazethapyr

thifensulfuron-methyl, atrazine, mesotrione, pyrasulfotole, tembotrione, topramezone

glyphosate

chlorsulfuron, atrazine, glyphosate, 2,4-D, mesotrione

2,4-D

glyphosate

glyphosate

chlorimuron-ethyl, glyphosate

glyphosate

pyrithiobac-sodium, glyphosate

imazethapyr, imazaquin, chlorimuron-ethyl, oxasulfuron, halosulfuron-methyl, flumetsulam, cloransulam-methyl

glyphosate

mesotrione, tembotrione, topramezone

atrazine

atrazine, mesotrione, tembotrione, topramezone

atrazine, glyphosate

glyphosate

glyphosate

chlorimuron-ethyl

Situations
Soybean
Cotton
Soybean
Cotton, Soybean
Soybean
Cotton, Soybean
Soybean
Corn (maize)
Pumpkin and squash
Soybean
Soybean
Cropland
Corn (maize), Cotton
Soybean
Peanut (groundnut)
Cotton, Soybean
Cotton
Corn (maize)
Corn (maize)
Corn (maize), Soybean
Corn (maize), Soybean
Corn (maize), Soybean
Corn (maize), Soybean, Horseradish
Corn (maize), Soybean
Corn (maize), Soybean
Alfalfa, Corn (maize), Soybean, Sorghum
Corn (maize), Sorghum
Soybean
Corn (maize), Sorghum
Cotton, Soybean
Sorghum
Sorghum
Soybean
Cotton
Soybean
Soybean
Cotton
Soybean
Corn (maize), Cotton, Soybean
Corn (maize)
Corn (maize)
Corn (maize)
Soybean
Soybean
Orchards, Pecan nut
Soybean

2005	Amaranthus palmeri	United States	North Carolina
2016	Amaranthus palmeri	United States	North Carolina
2010	Amaranthus palmeri	United States	Ohio
2018	Amaranthus palmeri	United States	Oklahoma
2013	Amaranthus palmeri	United States	Pennsylvania
1989	Amaranthus palmeri	United States	South Carolina
1997	Amaranthus palmeri	United States	South Carolina
2006	Amaranthus palmeri	United States	South Carolina
2010	Amaranthus palmeri	United States	South Carolina
1996	Helianthus annuus	United States	South Dakota
1994	Amaranthus palmeri	United States	Tennessee
1998	Amaranthus palmeri	United States	Tennessee
2006	Amaranthus palmeri	United States	Tennessee
2009	Amaranthus palmeri	United States	Tennessee
2015	Amaranthus palmeri	United States	Tennessee
1993	Amaranthus palmeri	United States	Texas
2011	Amaranthus palmeri	United States	Texas
2015	Helianthus annuus	United States	Texas
2011	Amaranthus palmeri	United States	Virginia
2013	Amaranthus palmeri	United States	Wisconsin
2014	Amaranthus palmeri	United States	Wisconsin

EPSP synthase inhibitors (G/9)
HPPD inhibitors (F2/27)
EPSP synthase inhibitors (G/9)
EPSP synthase inhibitors (G/9)
EPSP synthase inhibitors (G/9)
Microtubule inhibitors (K1/3)
ALS inhibitors (B/2)
EPSP synthase inhibitors (G/9)
ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)
ALS inhibitors (B/2)
ALS inhibitors (B/2)
Microtubule inhibitors (K1/3)
EPSP synthase inhibitors (G/9)
ALS inhibitors (B/2), EPSP synthase inhibitors (G/9)
EPSP synthase inhibitors (G/9), PPO inhibitors (E/14)
Photosystem II inhibitors (C1/5)
EPSP synthase inhibitors (G/9)
EPSP synthase inhibitors (G/9)
EPSP synthase inhibitors (G/9)
EPSP synthase inhibitors (G/9)
ALS inhibitors (B/2), HPPD inhibitors (F2/27)

glyphosate
mesotrione
glyphosate
glyphosate
glyphosate
trifluralin
imazethapyr, imazaquin, imazapic
glyphosate
pyrithiobac-sodium, thifensulfuron-methyl, glyphosate, trifloxysulfuron-sodium
imazethapyr
imazaquin, pyrithiobac-sodium
trifluralin
glyphosate
pyrithiobac-sodium, chlorimuron-ethyl, glyphosate
fomesafen, glyphosate
atrazine
glyphosate
glyphosate
glyphosate
glyphosate
imazethapyr, thifensulfuron-methyl, tembotrione

Corn (maize), Cotton, Soybean
Corn (maize)
Corn (maize), Soybean
Soybean
Soybean
Cotton, Soybean
Corn (maize), Cotton, Soybean, Peanut (groundnut)
Cotton, Soybean
Corn (maize), Cotton, Soybean
Cropland
Cotton, Soybean
Cotton, Soybean
Corn (maize), Cotton, Soybean
Cotton, Soybean
Soybean
Corn (maize), Sorghum
Cotton
Corn (maize)
Soybean
Corn (maize), Soybean
Corn (maize)